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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,689	12/10/2004	Nora Brambilla	DE 020157	3098

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BRIARCLIFF MANOR, NY 10510

EXAMINER

LE, TUNG X

ART UNIT	PAPER NUMBER
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2821

MAIL DATE	DELIVERY MODE
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07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary

Application No.

10/517,689

Applicant(s)

BRAMBILLA ET AL.

Examiner

Tung X. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment received 3/15/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is a response to the applicant's communication submitted on March 15, 2007. In virtue of this amendment, claims 1-18 remain pending in the instant application.

Withdrawal of Finality

1. Upon reconsideration, the finality of the previous Office action is hereby withdrawn. Applicant's amendment after final filed on March 15, 2007 has been entered.

Claim Objections

2. Claims 13-14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 13-14 fail to further limit the subject matter of claim 1.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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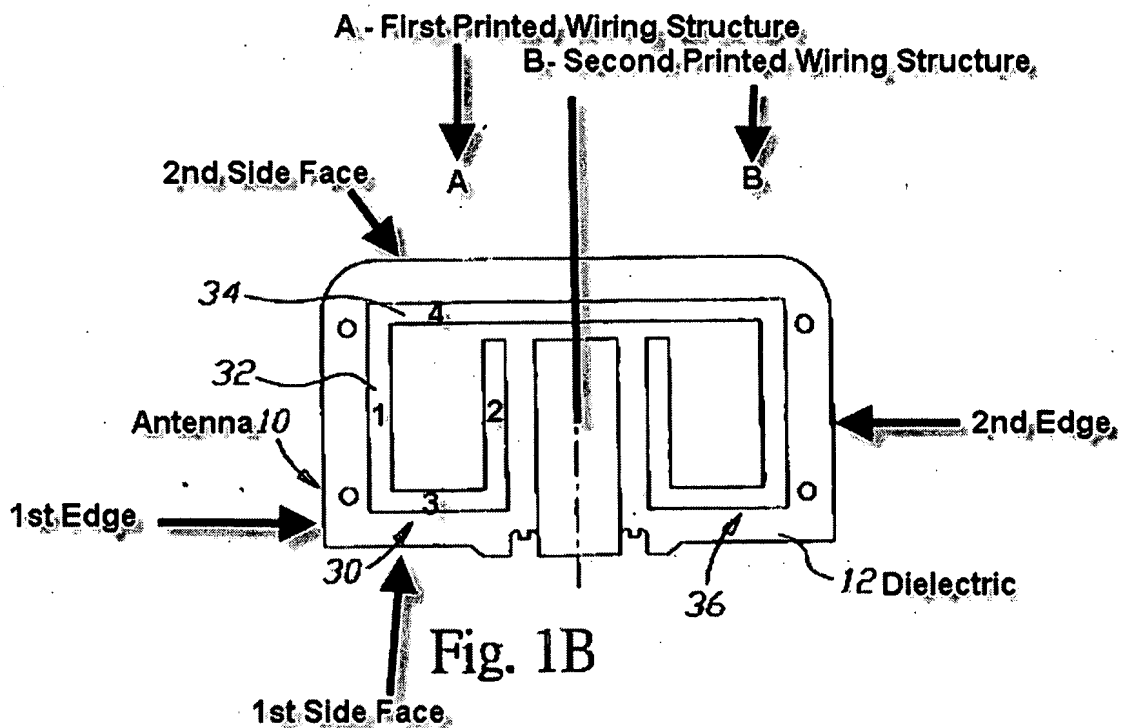
4. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Shih (U.S. 6,888,506 B2).

With respect to claim 1, Shih discloses in figure 1B an antenna (10) having a dielectric substrate (12) having two larger end faces (having a top face and a bottom face) and four smaller end faces (having four side end faces of the antenna [10]) and two resonant printed wiring structures (A and B) for use in high-frequency and microwave range, a first printed wiring structure (A) being arranged on one end face (on the top face of the left side of the antenna [10]) of the substrate (12) along a first edge (the left side edge of the first edge) and a second printed wiring structure (B) on an opposite (on the right side of the antenna [10]), second edge (the right side edge of the second edge) of the same end face (on the top face of the right side of the antenna [10]), wherein each of the first and second printed wiring structures (A,B) includes a first printed wire (1) on the end face extending from a first one of the side faces (1st side face) to a second one of the side faces (2nd side face) along one of the edges of the end face (along 1st edge of the top face), a second printed wire (2) disposed on the end face in parallel to and spaced apart from the first printed wire (figure 1B), and also extending from the first side face (1st side face) to the second side face (having a second printed wire extending from the 1st side face to the 2nd side face but not reached or touched the 2nd side face), and a third printed wire (3) disposed on the end face extending between the first printed wire and the second printed wire perpendicularly to the first and second printed wires to connect the first printed wire to the second printed wire (figure 1B).

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With respect to claim 2, Shih discloses that the second printed wiring structure (B) being equal to the first printed wiring structure (A) as regards shape and size (figure 1B).

With respect to claim 3, Shih discloses that the substrate (12) is in essence rectangular (figure 1B) and four smaller end faces (four side faces of the antenna [10]) and in that the first and second printed structures being deposited on a first end face (the left end face) and stretch out from a first to a second, opposite side face along the edge (see figure 1B).



With respect to claim 4, Shih discloses that the first and second printed wiring structures (A,B) have the form of a rectangular face (figure 1B).

With respect to claim 5, Shih discloses in figure 1B an antenna (10) having a dielectric substrate (12) and two resonant printed wiring structures (A,B) for use in high frequency and microwave range, a first printed wiring structure (A) being arranged on one end face (on the top face of the antenna [10]) of the substrate along a first edge (1st edge or the left side of the antenna [10]) and a second printed wiring structure (B) on an opposite (on the right side of the antenna [10]), second edge (2nd edge) of the same face (top end face), wherein the substrate (12) is in essence rectangular (figure 1B) having two larger end faces (a top face and a bottom face) and four smaller end faces (left, right, front, and back faces of the antenna [10]) and in that the first and second printed wiring structures are deposited on a first end face (top end face) and stretch out from a first to a second (figure 1B), opposite side face along the edge (figure 1B), and wherein each printed wiring structure is subdivided into three printed wires where a first printed wire (1) stretches out from the first to the second side face along the edge (1st edge), a second printed wire (2) stretches out from the second to the first end face (figure 1B), and a third printed wire (3) is connected to the first printed wire and the first printed wire is connected to the second printed wire (figure 1B).

With respect to claim 6, Shih discloses that a fourth printed wire (4) is connected to the second printed wire (figure 1B).

With respect to claim 7, Shih discloses that the first and second printed wires (1, 2) are equally long (figure 1B).

With respect to claim 8, Shih discloses that the third and fourth printed wires (3, 4) are equally long (figure 1B).

With respect to claim 9, Shih discloses in figure 1B that the first and second printed wires (1, 2) are longer than the third and fourth printed wires (3, 4).

With respect to claim 10, Shih discloses that the fourth printed wire (4) runs along an edge (having an edge of the 2nd side face of the first end face (figure 1B).

With respect to claim 11, Shih discloses that the first and third printed wires (1, 3) are arranged perpendicular to the second and fourth printed wires (figure 1B).

With respect to claim 12, Shih discloses that the first and second printed wiring structures (A,B) are mirrored on the first end face (figure 1B).

With respect to claim 13, Shih discloses that a printed wiring board (12) on which an antenna (10) as defined is arranged (figure 1B).

With respect to claim 14, Shih discloses a radio communication device using for the GPS, DCS/PCS, UMTS and Bluetooth domain characterized by an antenna (intended use).

With respect to claim 15, Shih discloses in figure 1B that each of the first and second printed wiring structures (A, B) further includes a fourth printed wire (4) disposed on the one end face, and being connected to one of the first and second printed wires (1).

With respect to claim 16, Shih discloses in figure 1B a printed circuit board assembly comprising a printed circuit board (12), and an antenna (10) mounted on the printed circuit board (figure 1B), the antenna including a dielectric substrate (12) having two larger end faces (having one top face and one bottom face) and four smaller end faces (four side faces of left, right, front, and back side faces of the antenna [10]) and

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two resonant printed wiring structures (A, B), adapted for use in high frequency and microwave range, a first printed wiring structure (A) being arranged on one end face of the substrate along a first edge (1st edge) and a second printed wiring structure (B) on an opposite (figure 1B), second edge (2nd edge) of the same end face (having the same top end face), wherein each of the first and second printed wiring structures includes, a first printed wire (1) disposed on the one end face extending from a first one of the side faces (1st side face) to a second one of the side faces (2nd side face) along one of the edge of the end face (figure 1B), a second printed wire (2) disposed on the one end face in parallel to and spaced apart from the first printed wire, and also extending from the first side face to the second side face (figure 1B), and a third printed wire (3) disposed on the one end face extending between the first printed wire and the second printed wire perpendicularly to the first and second printed wires to connect the first printed wire to the second printed wire (figure 1B).

With respect to claim 17, Shih discloses that the first and second printed wiring structures comprises silver paste (inherently for using a silver paste for an antenna), and wherein the antenna is mounted on the printed circuit board (12) such that the one end face of the antenna on which are disposed the first and second printed structures (A, B) is disposed directly on and immediately adjacent to the printed wiring board (figure 1B).

With respect to claim 18, Shih discloses in figure 1B that each of the first and second printed wiring structures (A, B) further includes a fourth printed wire (4) disposed

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on the one end face, and being connected to one of the first and second printed wires (1).

Citation of Relevant Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Su et al. (U.S. 6,624,793 B1) discloses a dual-band dipole antenna.

Fang et al. (U.S. 6,621,464 B1) discloses a dual-band dipole antenna.

Inquiry

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Le whose telephone number is 571-272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

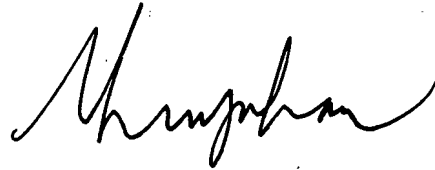
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner
Tung Le
AU 2821
July 18, 2007

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', written in a cursive style.

**THUY V. TRAN
PRIMARY EXAMINER**